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EXAMINER	
LE, LANA N	

ART UNIT	PAPER NUMBER
2618	

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/081,256	OVARD ET AL.
	Examiner	Art Unit
	Lana N. Le	2618

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on 30 May 2006.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-22,24-41 and 44-57 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-22, 24-41, 44-57 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-4, 7, 9, 24-27, 29-30, 40-41, 44-45, 48, 50-56 are rejected under 35 U.S.C. 102(b) as being anticipated by MacLellan et al (US 5,649,296).

Regarding claim 1, MacLellan et al disclose a wireless communication system comprising:

at least one remote communication device (105; fig. 1) configured to communicate a return link wireless signal (col 4, lines 16-18) responsive to a forward link wireless signal (col 3, lines 35-37); and

an interrogator (103; figs. 1 & 3) including a communication station (203, 307) configure to output the forward link wireless signal (col 3, lines 35-37), to receive (via receive antenna 206 and 307) the return link wireless signal outputted from the remote communication device (103) and to generate a return link communication signal (via 307) corresponding to the return link wireless signal (fig. 3),

communication circuitry (mixer 308, amplifier 309) coupled with the communication station and configured to communicate the return link communication signal (col 3, lines 53-62), and

a housing (BPF 310, limiting amplifier 310a, demodulator 312, processor 300) remotely located with respect to the communication station and including circuit configured to receive the return link communication signal from the communication circuit and to process the return link communication signal (col 3, line 59-62).

Regarding claim 2, MacLellan et al disclose the wireless communication system according to claim 1 wherein the communication station includes a low noise amplifier (307) configured to increase the power of the return link communication signal (col 3, lines .

Regarding claim 3, MacLellan et al disclose the wireless communication system according to claim 1 wherein the housing includes adjustment circuitry (BPF and Limiting Amplifier) configured to receive the return link communication signal from the communication circuitry (308 and immediate amplifier) and to adjust an electrical characteristic of the return link communication signal (fig. 3).

Regarding claim 4, MacLellan et al disclose the wireless communication system according to claim 3 wherein the adjustment circuit (BPF and limiting amp) is configured to output the return link communication signal at a substantially constant level.

Regarding claim 7, MacLellan et al disclose the wireless communication system according to claim 1 wherein the communication circuitry (308 and amplifier) includes a coaxial RF cable (cable connected from mixer to amplifier) (fig. 3).

Regarding claim 9, MacLellan et al disclose the wireless communication system according to claim 1 wherein the remote communication device (105) comprises a radio frequency identification device (see fig. 1).

Regarding claim 24, MacLellan et al disclose a method of communicating within a wireless communication system comprising:

providing an interrogator (103; figs. 1 & 3) and at least one remote communication device; communicating a forward link wireless signal using a communication station (203, 307) of the interrogator (col 3, lines 35-37); communicating a return link wireless signal using the remote communication device responsive to the communicating of the forward link wireless signal (col 4, lines 16-18); receiving the return link wireless signal within the communication station (307) (col 4, lines 52-57; col 3, lines 59-62), generating a return link communication signal (via 307) within the communication station corresponding to the return link wireless signal received via antenna 306; communicating the return link communication signal from the communication station (307) using communication circuitry (mixer 308, amp 309) (col 3, lines 53-62); and

receiving the return link communication signal from the communication circuitry within a housing (BPF 310, limiting amp 310a; demod 312, processor 300) of the interrogator remotely located from the communication station (307) (col 3, lines 59-62).

Regarding claim 25, MacLellan et al disclose the method according to claim 24 further comprising amplifying (via limit amp 310a) the return link communication signal before the communicating the return link communication signal.

Regarding claim 26, MacLellan et al disclose the method according to claim 24 adjusting (via BPF 310 and limiting amp 310a) at least one electrical characteristic of the return link communication signal.

Regarding claim 27, MacLellan et al disclose method according to claim 26 wherein the adjusting (via BPF 310 and limiting amp 310a) provides a return link communication signal having a substantially constant level.

Regarding claim 29, MacLellan et al disclose the method according to claim 24 wherein the providing at least one remote communication device comprises providing a radio frequency identification device (id tag 105; fig. 1).

Regarding claim 30, MacLellan et al the method according to claim 24 further comprising processing (via 300) the return link communication signal after the receiving the return link communication signal (fig. 3).

Regarding claim 40, MacLellan et al disclose the wireless communication system according to claim 1 wherein MacLellan et al disclose the at least one remote communication device (105) is configured to receive the forward link wireless signal (col 3, lines 63-67), and to communicate the return link wireless signal responsive to receiving the forward link wireless signal (col 4, lines 16-18).

Regarding claim 41, MacLellan et al disclose the method according to claim 24 wherein MacLellan et al disclose the method further comprising receiving the forward link wireless signal within the at least one remote communication device (105) (col 3, lines 63-67), and wherein the communicating the return link wireless signal is responsive to the receiving (col 4, lines 16-18).

Regarding claim 44, MacLellan et al disclose the wireless communication system according to claim 1 wherein MacLellan et al disclose the at least one remote

communication device and the interrogator are configured to implement radio frequency identification device (RFID) communications (col 2, lines 59-66).

Regarding claim 45, MacLellan et al disclose the wireless communication system according to claim 1 wherein the communication station is configured to generate the return link communication signal (via 307) comprising data received within the return link wireless signal received via antenna 306.

Regarding claim 48, MacLellan et al disclose the method according to claim 24 wherein the generating (via 307) comprises generating the return link communication signal to comprise data received within the return link wireless signal received via antenna 306.

Regarding claim 50, MacLellan et al disclose the wireless communication system according to claim 1 wherein the housing (310, 310a, 312, 300; col 3, lines 45-62) is configured to house the circuit configured to receive the return link communication signal (communication signal from 308 and IF amp) and to process (via 310, 310a, 312, 300) the return link communication signal (via 312, 300).

Regarding claim 51, MacLellan et al disclose the wireless communication system according to claim 1 wherein the housing (310, 310a, 312, 300) is configured to house the circuitry configured to receive the return link communication signal (communication signal from 308 and IF amp) and to process the return link communication signal separately (via 310, 310a, 312, 300) from circuit of the communication station (307).

Regarding claim 52, MacLellan et al disclose the wireless communication system according to claim 1, wherein the communication station (307) comprises a circuit device remotely located from the housing (310, 310a, 312, 300).

Regarding claim 53, MacLellan et al disclose the wireless communication system according lo claim 1, wherein the communication station (307) and housing (310, 310a, 312, 300) comprise respective different circuit devices (shown in figure 3).

Regarding claim 54, MacLellan et al disclose the wireless communication system according to claim 1, wherein the communication circuitry (mixer 308 and IF amp) is configured to communicate the return link communication signal comprising a wireless signal (wireless signal received via antenna 306 and converted to IF via 308).

Regarding claim 55, MacLellan et al disclose the wireless communication system according to claim 1, wherein the communication circuitry (mixer 308 and IF amp) is configured to communicate the return link communication signal comprising a wireless signal (wireless signal received via antenna 306) having a frequency outside of a frequency band of the wireless communications of the forward link wireless signal and the return link wireless signal (frequency band within IF range by converting via 308).

Regarding claim 56, MacLellan et al disclose the wireless communication system according to claim 1, wherein the communication station (307) and housing (310, 310a, 312, 300) are located in different geographical locations (due to the placement of circuit element 307 in another area of the receiver than the housing circuitry).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 5-6 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan in view of Jandrell (US 5,526,357).

Regarding claim 5, MacLellan et al disclose the wireless communication system according to claim wherein MacLellan et al do not specifically disclose the adjustment circuitry includes automatic gain control circuitry. Jandrell discloses an adjustment circuitry (3008; 3031, 3033; figs. 32b, 32d) includes automatic gain control circuitry (3008, fig. 32b; col 51, lines 40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have automatic gain control in order to maintain gain at a constant level and to control the gain of the limiting amplifier as suggested by Jandrell.

Regarding claim 6, MacLellan et al disclose the wireless communication system according to claim 5 wherein Jandrell discloses the automatic gain control circuitry (3008; fig. 32b) is configured to monitor the power of return link communication signal and to adjust the power of the return link communication signal (via controlling gain of 3033; fig. 32d) responsive to the monitoring (col 51, lines 40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust

the power of the return link communication signal in order to maintain the level of the downconverted signal constant regardless of the time varying RF signal.

Regarding claim 28, MacLellan et al disclose the method according to claim 26 wherein the adjusting comprises adjusting using automatic gain control circuitry. MacLellan et al do not specifically disclose the adjusting circuitry includes automatic gain control circuitry. Jandrell discloses an adjusting circuitry (3008; 3031, 3033; figs. 32b, 32d) includes automatic gain control circuitry (3008, fig. 32b; col 51, lines 40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have automatic gain control in order to maintain gain at a constant level and to control the gain of the limiting amplifier as suggested by Jandrell.

5. Claims 14-15, 20, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al in view of Reis et al (US 5,640,151) and further in view of Jandrell (US 5,526,357).

Regarding claim 14, MacLellan et al and Reis et al disclose the interrogator according to claim 12, wherein MacLellan et al do not specifically disclose the adjustment circuitry includes automatic gain control circuitry. Jandrell discloses an adjustment circuitry (3008; 3031, 3033; figs. 32b, 32d) includes automatic gain control circuitry (3008, fig. 32b; col 51, lines 40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have automatic gain control in order to maintain gain at a constant level and to control the gain of the limiting amplifier as suggested by Jandrell.

Regarding claim 15, MacLellan et al, Reis et al, and Jandrell disclose the interrogator according to claim 14 wherein Jandrell discloses the automatic gain control circuitry (3008, fig. 32b) is configured to monitor the power of return link communication signal and to adjust the power of the return link communication signal responsive to the monitoring (col 51, lines 40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to adjust the power of the return link communication signal in order to maintain the level of the downconverted signal constant regardless of the time varying RF signal.

Regarding claim 20, MacLellan et al and Reis et al disclose the interrogator according to claim 19, wherein MacLellan et al and Reis et al do not specifically disclose the adjustment circuitry includes automatic gain control circuitry. Jandrell discloses an adjustment circuitry (3008; 3031, 3033; figs. 32b, 32d) includes automatic gain control circuitry (3008, fig. 32b; col 51, lines 40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have automatic gain control in order to maintain gain at a constant level and control the gain of the limiting amplifier as suggested by Jandrell.

Regarding claim 35, MacLellan et al and Reis et al disclose the method according to claim 33 wherein MacLellan et al and Reis et al do not disclose the adjusting comprises adjusting using automatic gain control circuitry. Jandrell discloses an adjusting circuitry (3008; 3031, 3033; figs. 32b, 32d) comprises adjusting using automatic gain control circuitry (3008, fig. 32b; col 51, lines 40-45). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have

automatic gain control in order to maintain gain at a constant level and to control the gain of the limiting amplifier as suggested by Jandrell.

6. Claims 8, 10-13, 16-19, 21-22, 31-34, 36-39, 46-47, 49, and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over MacLellan et al (US 6,456,668) in view of Reis et al (US 5,640,151).

Regarding claim 8, MacLellan et al disclose the wireless communication system according to claim 1 wherein MacLellan do not disclose the communication circuitry includes a plurality of wireless transceivers individually coupled with one of the housing and the communication station. Reis et al disclose an interrogator (fig. 2) comprising communication circuitry including a plurality of wireless transceivers (101-1-->101-M, 103-1 -->103-M) individually coupled with one of the housing (102) and the communication station (col 9, lines 35-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of wireless transceivers within the interrogator of MacLellan in order to be able to broadcast commands from one interrogator on a one-to-many basis or even one to one basis on multiple transmitters and to receive responses from the abundant remote tags on multiple receivers in a large communication region as suggested by Reis et al (col 6, lines 20-33).

Regarding claim 10, MacLellan et al disclose an interrogator of a wireless communication system comprising an interrogator (103; figs. 1 & 3) including a communication station (203, 307) configure to output the forward link wireless signal (col 3, lines 35-37), to receive (via receive antenna 206 and 307) the return link wireless

signal outputted from the remote communication device (103) (col 4, lines 16-18, lines 52-57; col 3, lines 59-62) and to generate a return link communication signal (via 307) corresponding to the return link wireless signal (fig. 3), a communication circuitry (mixer 308, amplifier 309) coupled with the communication station and configured to communicate the return link communication signal, and a housing (BPF 310, limiting amp 310a, demodulator 312, processor 300) remotely located with respect to the communication station and including circuit configured to receive the return link communication signal from the communication circuit and to process the return link communication signal (col 3, lines 59-62). MacLellan et al do not disclose an interrogator comprising a plurality of communication stations positioned in different locations and individually configured to output a forward link wireless signal, to receive a return link wireless signal responsive to the outputting, and to generate a return link communication signal corresponding to the return link wireless signal; communication circuits individually coupled with the communication stations and configured to communicate respective ones of the return link communication signals; and a housing remotely located with respect to the communication stations and including circuitry configured to receive the return link communication signals from the communication circuits and to process the return link communication signals. Reis et al disclose an interrogator (fig. 2) comprising a plurality of communication stations (101-1-->101-M, 103-1 -->103-M) positioned in different locations and individually configured to output a forward link wireless signal (via RF Trans 103-1 -->103-M), to receive a return link wireless signal responsive to the outputting (via RF Rec (101-1-->101-M), and to

generate a return link communication signal corresponding to the return link wireless signal (col 9, lines 35-65); communication circuits (circuitry connected within 101-1 -->101-M, 103-1 -->103-M) which represent the whole conventional superheterodyne or other similar receiver inherently containing communication circuits) individually coupled with the communication stations and configured to communicate respective ones of the return link communication signals (col 9, lines 49-54, lines 23-34); and a housing (102) remotely located with respect to the communication stations and including circuitry configured to receive the return link communication signals from the communication circuits and to process the return link communication signals (col 9, lines 35-65; col 10, lines 41-53). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of communication modules within the interrogator of MacLellan in order to be able to broadcast commands from one interrogator on a one-to-many basis or even one to one basis on multiple transmitters and to receive responses from the abundant remote tags on multiple receivers in a wide communication region as suggested by Reis et al (col 6, lines 20-33).

Regarding claim 11, MacLellan et al and Reis et al disclose the wireless communication system according to claim 1, wherein MacLellan et al disclose each of the communication station includes a low noise amplifier (307) configured to increase the power of the return link communication signal (fig. 3).

Regarding claim 12, MacLellan et al and Reis et al disclose the wireless communication system according to claim 10, wherein MacLellan et al disclose the housing includes adjustment circuitry (BPF 310 and Limiting Amplifier 310a) configured

to receive the return link communication signal from the communication circuitry (308 and immediate amplifier) and to adjust an electrical characteristic of the return link communication signal (fig. 3).

Regarding claim 13, MacLellan et al and Reis et al disclose the wireless communication system according to claim 12, wherein the adjustment circuit (BPF and limiting amp) is configured to output the return link communication signal at a substantially constant level.

Regarding claim 16, MacLellan et al and Reis et al disclose the wireless communication system according to claim 12, wherein the communication circuitry (308 and amplifier) includes a coaxial RF cable (cable connected from mixer to amplifier) (fig. 3).

Regarding claim 17, MacLellan et al and Reis et al disclose the wireless communication system according to claim 10, wherein Reis et al disclose the interrogator (fig. 2) comprising communication circuitry including a plurality of wireless transceivers(101-1-->101-M, 103-1 -->103-M) individually coupled with one of the housing (102) and the communication station (col 9, lines 35-65).

Regarding claim 18, MacLellan et al disclose an interrogator of a wireless communication system comprising an interrogator (103; figs. 1 & 3) including a communication station (203, 307) configure to output the forward link wireless signal (col 3, lines 30-32), to receive (via receive antenna 206 and 307) the return link wireless signal outputted from the remote communication device (103) responsive to the outputting (col 4, lines 16-18, lines 52-57; col 3, lines 59-62) and to generate a return

link communication signal (via 307) corresponding to the return link wireless signal (fig. 3), and a housing (BPF 310, limiting amp 310a, demodulator 312, processor 300) remotely located with respect to the communication station and including circuit configured to receive the return link communication signal from the communication circuit and to process the return link communication signal (col 3, lines 59-62). MacLellan et al do not disclose an interrogator comprising a plurality of communication stations positioned in different locations and individually configured to output a forward link wireless signal, to receive a return link wireless signal responsive to the outputting, and to generate a return link communication signal corresponding to the return link wireless signal; and a housing remotely located with respect to at least one of the communication stations and including circuitry configured to receive the return link communication signals from the communication circuits and to process the return link communication signals. Reis et al disclose an interrogator (fig. 2) comprising a plurality of communication stations (101-1-->101-M, 103-1 -->103-M) positioned in different locations and individually configured to output a forward link wireless signal (via RF Trans (103-1 -->103-M), to receive a return link wireless signal responsive to the outputting (RF Rec 101-1-->101-M), and to generate a return link communication signal corresponding to the return link wireless signal (col 9, lines 35-65); and a housing (102) remotely located with respect to at least one of the communication stations (101-1-->101-M, 103-1 -->103-M) and including circuitry configured to receive the return link communication signals from the communication circuits and to process the return link communication signals (col 9, lines 35-65; col 10, lines 41-53). It would have been

obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of communication modules within the interrogator of MacLellan in order to be able to broadcast commands from one interrogator on a one-to-many basis or even one to one basis on multiple transmitters and to receive responses from the abundant remote tags on multiple receivers in a wide communication region as suggested by Reis et al (col 6, lines 20-33).

Regarding claim 19, MacLellan et al and Reis et al disclose the interrogator according to claim 18 wherein MacLellan et al disclose the housing includes adjustment circuitry (BPF 310 and limiting amp 310a) configured to adjust at least one electrical characteristic of the return link communication signals.

Regarding claim 21, MacLellan et al and Reis et al disclose the interrogator according to claim 18 wherein MacLellan et al disclose the interrogator comprise communication circuits (mixer 308, amplifier 309) coupled with the communication station and configured to communicate the return link communication signal (col 3, lines 53-62) and where Reis et al disclose the interrogator comprising a plurality of communication circuits (circuitry connected within 101-1-->101-M, 103-1 -->103-M which represent a whole conventional superheterodyne or other similar receiver inherently containing communication circuits) of communication modules configured to communicate the return link communication signals intermediate respective communication stations and the housing (col 9, lines 35-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of communication circuitry in order to have more circuitry to strengthen the

characteristic of the received RF signals when a signal from a particular remote device out of a plurality of remote device sends a corresponding return wireless link to a particular communication station for reception.

Regarding claim 22, MacLellan et al and Reis et al disclose the interrogator according to claim 18 wherein Reis et al disclose the communication stations (101-1-->101-M, 103-1 -->103-M) are individually positioned to receive return link wireless signals within one of a plural of communication ranges (fig. 2; col 9, lines 35-65).

Regarding claim 31, MacLellan et al disclose a method of communicating within a wireless communication system comprising:

providing an interrogator (103; figs. 1 & 3) having a housing (BPF 310, limit amp 310a, 312, 300) and a communication station (203, 307) remotely located from the housing ,

communicating forward link wireless signals using the communication stations of the interrogator (103) (col 3, lines 35-37),

receiving return link wireless signals within the respective communication stations of the interrogator responsive to the communicating the respective forward link wireless signals (col 4, lines 16-18, lines 52-57; col 3, lines 59-62),

generating return link communication signals (via 307) within the communication station (203, 307) corresponding to the return link wireless signal (col 3, lines 53-62),

communicating the return link communication signals from the communication station using respective communication circuits; and receiving the return link communication signals within the housing from the communication circuits. MacLellan

et al do not disclose a plurality of communication stations remotely located from the housing, and communicating the return link communication signals from the communication stations using respective communication circuits. Reis et al disclose a plurality of communication stations (101-1-->101-M, 103-1 -->103-M) remotely located from the housing (102), and communicating the return link communication signals from the communication stations using respective communication circuits (circuits connected within 101-1-->101-M, 103-1 -->103-M which represent the whole conventional superheterodyne or other similar receiver inherently containing communication circuits) (col 9, lines 49-54, lines 23-34) and receiving the return link communication signals within the housing (102) from the communication circuits (col 9, lines 35-65).

Regarding claim 32, MacLellan et al and Reis et al disclose the method according to claim 31 further comprising amplifying the return link communication signals before the communicating the return link communication signals.

Regarding claim 33, MacLellan et al and Reis et al disclose the method according to claim 31 wherein MacLellan et al and disclose the method comprising adjusting at least one characteristic of the return link communication signals (via BPF 310 and limit amp 310a) after the receiving the return link communication signals.

Regarding claim 34, MacLellan et al and Reis et al disclose the method according to claim 33 wherein MacLellan et al disclose the adjusting (via BPF 310 and limit amp 310a) provides return link communication signals having a substantially constant level.

Regarding claim 36, MacLellan et al and Reis et al disclose the method according to claim 31, wherein Reis et al disclose the communication stations (101-1-->101-M, 103-1 -->103-M) individually receive return link wireless signals within one of a plurality of communication ranges (col 9, lines 35-65).

Regarding claim 37, MacLellan et al and Reis et al disclose the method according to claim 31, wherein MacLellan et al disclose further comprising processing (via 300; fig. 3) the return link communication signals after the receiving the return link communication signals.

Regarding claim 38, MacLellan et al and Reis et al disclose the wireless communication system according to claim 1, wherein Reis et al disclose the interrogator comprises a plurality of the communication stations (101-1-->101-M, 103-1 -->103-M).

Regarding claim 39, MacLellan et al disclose the method according to claim 24, wherein MacLellan et al do not disclose the providing comprises providing the interrogator comprising a plurality of the communication stations. Reis et al disclose providing the interrogator (103) comprising a plurality of the communication stations (101-1-->101-M, 103-1 -->103-M). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a plurality of the communication stations in order to receive responsive signals from each of the remote tags at each of the corresponding receivers.

Regarding claim 46, MacLellan et al and Reis et al disclose the interrogator according to claim 10, wherein Reis et al disclose the communication stations (101-1-->101-M, 103-1 -->103-M) are individually configured to generate the return link

communication signal via inherent receiving circuitry within the within the superheterodyne or similar receiver comprising data received within the return link wireless signals.

Regarding claim 47, MacLellan et al and Reis et al disclose the interrogator according to claim 18 wherein Reis et al disclose the communication stations (101-1-->101-M, 103-1 -->103-M) are configured to generate the return link communication signals comprising data received within respective ones of the return link wireless signals via inherent receiving circuitry within the superheterodyne or similar receiver comprising data received within the return link wireless signals.

Regarding claim 49, MacLellan et al and Reis et al disclose the method according to claim 31 wherein MacLellan et al disclose the generating comprises generating (via 307) the return link communication signals to comprise data received within respective ones of the return link wireless signals via antenna 306.

Regarding claim 57, MacLellan et al disclose the wireless communication system according to claim 1, wherein MacLellan et al do not disclose the interrogator comprises a plurality of the communication stations configured to communicate with respective remote communication devices located in different geographical locations.

Reis et al disclose an interrogator (fig. 2) comprising a plurality of communication stations (101-1-->101-M, 103-1 -->103-M) located in different locations and individually configured to communicate (via RF Trans (103-1 -->103-M, RF Rec 101-1-->101-M) with respective remote communication devices (8-1 to 8T) (col 9, lines 35-65). It would have been obvious to one of ordinary skill in the art at the time the invention was made

to have a plurality of communication modules within the interrogator of MacLellan in order to be able to broadcast commands from one interrogator on a one-to-many basis or even one to one basis on multiple transmitters and to receive responses from the abundant remote tags on multiple receivers in a wide communication region as suggested by Reis et al (col 6, lines 20-33).

Response to Arguments

7. Applicant's arguments filed 5/30/06 have been fully considered but they are not persuasive.

Regarding claim 1, applicant argues that the communication station fails to disclose a housing. However, the examiner respectfully disagrees. The "housing" is considered any spacing to allow circuitry elements 310, 310a, 312, and 300 either integrated into one baseband block to be placed and housed inside the entire interrogator 103 and internal wireless communications is capable of being carried out by passing the processed signal from the RF communication block to the IF communication circuitry and to the baseband communication circuitry. The claim does not specify the housing has to be separate from the communication circuitry.

Regarding claim 8, applicant argues the combination of the Reis cited reference with MacLellan et al is improper. In response to applicant's argument that there is no

suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988)and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case, the multiple transmitters (plurality of tags) and the multiple receivers (receivers within the interrogator) shown in the Reis reference disclose a suggestion that within the tags and interrogator, there can be a simultaneous and abundant communication one to many tags communication from different tags to save time and to reduce the need of having another interrogator built with a second separate receiver/transceiver. Therefore, one of ordinary skill in the art would be able to find that the combination of the multiple receivers within the interrogator for reception from multiple tags is proper.

Regarding dependent claims 5-6, 14-15, 20, 28, and 35 the priority has been noted and the arguments with respect to claims 5-6, 14-15, 20, 28, and 35 are moot in view of new grounds of rejection above.

Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lana N. Le whose telephone number is (571) 272-7891. The examiner can normally be reached on M-F 9:30-18:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward F. Urban can be reached on (571) 272-7899. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Lana Le

Lana N. Le
8-01-06

LANA LE
PRIMARY EXAMINER